

What is claimed is:

1. A circuit being set in a communication apparatus and co-operating with a button of an audio receiving/transmitting device for triggering an on-hook or off-hook function by pressing the button while the communication apparatus receives an incoming call, the communication apparatus comprising an audio-signal receiving port, a bias source, and a detecting-signal input port, the circuit comprising:
 - a connecting device comprising an audio-signal input end for electrically and detachably connecting to the audio receiving/transmitting device;
 - 10 a first signal line for connecting the audio-signal receiving port and the audio-signal input end;
 - a second signal line for connecting the bias source and the first signal line; and
 - 15 a detecting device for electrically connecting to the first signal line and the detecting-signal input port, wherein a first connecting point is defined in the place where the detecting device electrically connects to the first signal line, the detecting device being used for detecting a detecting signal of a voltage value of the first connecting point and outputting a detecting-signal value of the detecting signal to the detecting-signal input port; and
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- 25 wherein, when the audio receiving/transmitting device is electrically connected to the connecting device, and the communication apparatus receives the incoming call, and the button is pressed, a temporary broken circuit is caused between the audio-signal input end of the connecting device and the audio receiving/transmitting device, that further causes the detecting-signal value to be higher than a threshold value to trigger the on-hook function of the communication apparatus; and

wherein, when the on-hook function is activated, and the audio receiving/transmitting device is connected to the connecting device, and the button is pressed, the temporary broken circuit is re-caused between the audio-signal input end of the connecting device and the audio receiving/transmitting device, that further causes the detecting-signal value to be higher than the threshold value to trigger the off-hook function of the communication apparatus.

2. The circuit of claim 1, when the communication apparatus receives the incoming call, wherein the audio-signal receiving port is activated to receive an audio input signal from the audio receiving/transmitting device.
- 10 3. The circuit of claim 2, wherein the audio receiving/transmitting device comprises an audio-signal input line for transmitting the audio input signal.
4. The circuit of claim 3, wherein the button is set in the audio-signal input line.
5. The circuit of claim 1, further comprising a processor, the detecting-signal input port connecting to the processor, the detecting signal value being inputted into the processor via the detecting-signal input port, the processor triggering the on-hook and off-hook function of the communication apparatus according to the detecting signal value.
- 15 6. The circuit of claim 1, wherein the voltage of the bias source is higher than a threshold voltage, and when the button is pressed, the detecting signal detected by the detecting device is approximately equal to the voltage of the bias source.
- 20 7. The circuit of claim 6, wherein the detecting signal value represented the threshold voltage is equal to the threshold value.
8. The circuit of claim 6, wherein a second connecting point is identified in the place where the second signal line connects to the first signal line, and the first connecting point is located between the audio-signal input end and the second
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connecting point.

9. The circuit of claim 6, wherein the detecting device is an analog-to-digital converter.

10. The circuit of claim 9, wherein the analog-to-digital converter comprises a
5 detecting input end and a detecting output end, the analog-to-digital converter electrically connects to the first signal line by the detecting input end, and electrically connects to the detecting-signal input port by the detecting output end.

11. The circuit of claim 10, wherein the analog-to-digital converter further comprises a bias resistance connecting to the second signal line in series connection.

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